

**REMARKS**

The Official Action mailed March 15, 2002 has been received and its contents carefully noted. Filed concurrently herewith is a *Request for Two Month Extension of Time* which extends the shortened statutory period for response to August 15, 2002. Accordingly, Applicant respectfully submits that this response is being timely filed.

Applicants note with appreciation the consideration of the Information Disclosure Statement filed on July 21, 2000. A further IDS was recently filed on July 8, 2002 and review and consideration of this IDS is respectfully requested.

Claims 3-5, 11-13 and 17-19 were pending in the present application. Claims 17-19 have been canceled and claims 3-5 and 11-13 have been amended herewith. Thus, claims 3-5 and 11-13 are now pending in the present application, of which claims 3 and 5 are independent. For the reasons set forth in detail below, these claims are believed to be in condition for allowance.

The Official Action maintains the objections to reference numeral "14" in the drawings. Reference numeral 14 refers to a hologram pattern for non-diffracted light. It is respectfully submitted that the term "non-diffraction hologram pattern" is sufficiently clear and would be understood, in view of the full disclosure of the specification, to refer to a hologram pattern for non-diffracted light. Reconsideration is requested.

Paragraph 1 of the Official Action rejects claims 17 and 19 under 35 U.S.C. 132 for introducing new matter by the Amendment filed on January 14, 2002. Although these claims have been canceled, rendering this objection moot, it is respectfully submitted that it is improper to reject amendments to the claims under 35 U.S.C. 132 (See MPEP 2163.06, stating: "If new matter is added to the claims, the examiner should reject the claims under 35 U.S.C. 112, first paragraph - written description requirement. *In re Rasmussen*, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981)).

Paragraph 3 of the Official Action further rejects claims 17-19 under 35 U.S.C. 112, first paragraph. These claims have been canceled and thus this rejection is moot.

Paragraph 5 of the Official Action rejects claims 3-5, 11-13 and 17-19 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Official

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Action states that the reasons for rejection to claims 3, 11 and 19 set forth in the previous Official Action still hold.

In response, claims 17-19 have been canceled and claims 3-5 and 11-13 have been further amended herewith to correct the informalities noted by the Examiner. With respect to claims 3-5 and 11-13, the term "hologram pattern" means an interference fringe pattern as indicted in the specification on page 17, lines 11-15. In connection with the amendments, Applicant further notes MPEP 2173.01, *Claim Terminology*, which states:

A fundamental principle contained in 35 U.S.C. 112, second paragraph is that applicants are their own lexicographers. They can define in the claims what they regard as their invention essentially in whatever terms they choose so long as the terms are not used in ways that are contrary to accepted meanings in the art. Applicant may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought. As noted by the court in *In re Swinehart*, 439 F.2d 210, 160 USPQ 226 (CCPA 1971), a claim may not be rejected solely because of the type of language used to define the subject matter for which patent protection is sought.

It is respectfully asserted that claims 3-5 and 11-13 clearly define the metes and bounds of the invention using terminology that is adequately defined in the specification in a manner that is not contrary to the accepted meanings in the art. The claims are in accord with 35 U.S.C. 112, second paragraph and reconsideration of the outstanding rejections in view of the above amendments and remarks is requested.

Paragraph 7 of the Official Action rejects claims 3 and 11 as obvious based on the combination of U.S. Patent 5,828,643 to Takeda et al. and U.S. Patent 5,473,471 to Yamagata et al. Paragraph 8 of the Official Action further rejects claims 4, 12 and 13 as obvious based on the combination of Takeda, Yamagata and U.S. Patent 5,422,753 to Harris.

As stated in MPEP § 2143-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim

limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Yamagata discloses that a grating groove (a portion of a flat lens surface (2)) of a complex lens (1) has the effect of reducing the intensity of unwanted high order diffracted rays of light. Since this complex lens generates collimated rays of light (25), the complex lens corresponds to a collimator lens (18) in Figure 1 of the present application, and is clearly different from a hologram member (13) of the present application for generating a plurality of laser light sources. It appears that the Official Action concludes that it is obvious to provide a holographic optical element with the grating groove of Yamagata to increase the efficiency of the optical pickup head.

However, it is submitted that the Official Action fails to provide a sufficient rationale to use the grating groove in the hologram member for the plurality of imaginary laser light sources. In this connection, it does not appear that the Official Action states a motivation for the combination of Takeda's holographic optical element and Yamagata's teachings. The Examiner's attention is directed to MPEP § 2142, which states: "The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. 'To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.' *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)."

In addition, Applicants note that column 4, lines 62-66 of Yamagata, stating "the use of the complex lens . . . is therefore effective to maximize the utilization of the light,"

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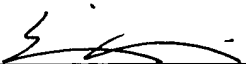
simply suggests that the unnecessary diffracted rays of light are reduced. That is, it does not appear that there is a suggestion that the reduced intensity of light is added to an intensity of a portion of the diffraction light used for light spot formation as in the present invention. Thus, even if combined, the references fail to teach or suggest all the claim limitations as required to establish a *prima facie* case of obviousness.

Paragraph 9 of the Official Action rejects claim 5 as obvious based on Harris. It is respectfully submitted that the Official Action has failed to respond to Applicant's earlier arguments concerning this rejection. Claim 5 recites a limitation that "a light spot forming optical element for . . . forming a servo light spot on a recording medium." The servo light spot (24) needs a uniform intensity in a whole servo light spot area, and claim 5 clearly defines that the servo light spot is generated by a hologram pattern. The cited prior art of record fails to disclose or suggest this feature of claim 5, or the formation of the light spot servo. Thus, Applicants believe that claim 5 is patentable over the references of record and favorable consideration is requested.

Paragraph 10 rejects claims 17-18 as being obvious based on U.S. Patent 4,875,761 to Fetzer. Paragraph 11 rejects claim 19 as obvious based on U.S. Patent 4,929,256 to Shepherd. As noted above, claims 17-19 have been canceled, and thus these rejections are moot.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

Please cancel claims 17-19 and amend claims 3-5 and 11-13 as follows:

3. (Twice Amended) An optical pickup device comprising:
  - a single real laser light source;
  - a hologram member for diffracting light emitted from said real laser light source to form at least one imaginary laser light source; and
  - a light spot forming optical element for receiving light from said hologram member and forming a plurality of light spots on tracks of a recording medium,wherein hologram patterns for diffracted light are provided on [of] said hologram member, said hologram patterns for diffracted light being [are] determined so that diffraction light is given an inverse aberration of an aberration to be caused by [optical elements] the hologram member, a collimator lens and the light spot forming optical element in an optical path from said real laser light source to the recording medium, each of the hologram patterns for [and the hologram pattern for diffraction] diffracted light corresponding to each imaginary laser light source is determined so that an intensity of a portion of [diffraction light] the diffracted light not used for light spot formation is reduced and the reduced intensity of that portion is added to an intensity of a portion of [diffraction] diffracted light used for light spot formation.
4. (Twice Amended) An optical pickup device according to claim 3, wherein a light spot on the recording medium formed by non-diffraction light from said real laser light source is used for servo operations, and said hologram member has a hologram pattern for non-diffracted light which provides a uniform intensity of the servo light spot in a whole light spot area.
5. (Twice Amended) An optical pickup device comprising:
  - a single real laser light source; and
  - a light spot forming optical element for receiving light from said real laser light source via a hologram member and forming a servo light spot on a recording medium,

wherein the hologram member has a hologram pattern for non-diffracted light which provides a uniform intensity of the servo light spot in a whole servo light spot area.

11. (Twice Amended) An optical pickup device according to claim 3, wherein each of the hologram patterns for [diffraction] diffracted light has curved fringe patterns.

12. (Twice Amended) An optical pickup device according to claim 4, wherein each of the hologram patterns for [diffraction] diffracted light has a plurality of grooves and an amount of light not to be diffracted is adjusted in accordance with depths of the grooves.

13. (Twice Amended) An optical pickup device according to claim 4, wherein each of the hologram patterns for [diffraction] diffracted light has a plurality of grooves and an amount of light not to be diffracted is adjusted in accordance with a ratio of a groove width to a non-groove width.